standards of inspection were deplorably low ; it was no uncommon thing to find a prostitute buying a negative blood report. Allied Military Government tackled the problem to the best of its ability, but it will take years to clean up these areas.

The belief that the recognition of brothels is the only cure was often thrust at me, especially by senior officers of the medical services. Judging from the results of experience in Algiers, the belief would seem to have some foundation. In Naples one eminent commander decreed that brothels should be available for his troops, especially those on leave ; but the incidence of venereal diseases which resulted soon produced a demand for a reversal of this order. Where there is promiscuity among women in the streets of a city, brothels will never remain uninfected.

So deplorable were all the factors predisposing to venereal diseases, that Lees and I wrote a treatise (Lees and Campbell) which was accepted by the War Office as a guide for all future theatres of war. However, as a result of the conglomeration of orders with which commanding officers had to deal, the recommendations were often forgotten. In the British Liberation Army, Field-Marshal Montgomery had to write very stern letters reminding commanding officers of their great responsibilities in these matters.

In France and Belgium the enthusiastic welcome to our men coming as liberators was offset only by the easy promiscuity of the population and by a high rate of incidence of venereal disease in these countries so long occupied by the Germans. No less was disease prevalent among German women, who, despite all attempts to prevent fraternization, prostituted themselves for food and chocolate in the early months of our occupation of that sadly battered country. World War II has confirmed the depressing fact that, despite the higher standards of education throughout the world in the preceding years, once war is unleashed promiscuity and venereal diseases assume the tremendous proportions which have accompanied wars throughout history. The consolation with which we are left is that standards of treatment have been so high and the work of venereologists, nurses and orderlies so commendably unselfish, that the aftermath left will not prove to be so damaging as in previous wars.

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DISCUSSION ON THE PRECEDING PAPERS

Dr. **G. L. M. McElligott** (the President) said that he thought that all those present would agree that the two papers had been no mere "travelogues", but that they had learned a great deal from them as well. They would all realize and agree that at home, now, they were in the midst of an epidemic of venereal disease which was not yet controlled. The ideas put forward about the prevention of venereal disease, as well as about its treatment, would be helpful.

With regard to the short-period sulphonamide treatments which had been advocated by certain workers, he had felt in 1943, and still felt now, that if a case of gonorrhoea did not react to a sulphonamide within two days it would not react at all. He would be interested to hear from Dr. Lees whether or not any work on this aspect of treatment had been done on the Continent. He had spoken to an American pathologist in Naples, who was probably connected with the laboratory to which Dr. Lees had alluded, and he had been told that the gonococcus, in such cases as had been investigated, was susceptible to sulphonamides *in vitro*.

Dr. **A. H. Harkness** had been particularly interested in Dr. Lee's statement that at one stage in the Italian campaign the two-day course of sulphonamide therapy had been partly responsible for the high rate of incidence of drug resistance. Dr. Harkness considered that the sulphonamide drugs still held an important place in the treatment of acute gonorrhoea, because in its treatment with penicillin there was always the danger of delaying the development of a concomitantly acquired syphilis. In view of this fact he still prescribed, in the first place, a course of sulphathiazole or sulphadiazine. Penicillin was used only in the treatment of failures, but he always made a thorough search for the primary lesion of syphilis before giving the injections. By the adoption of this method, the cure of gonorrhoea was delayed in only a small percentage of cases (the incidence of drug resistance not being so high as many workers thought) ; there were fewer

cases of residual non-gonococcal urethritis and, what was much more important, the diagnosis of a concomitantly acquired syphilis was made in a large proportion of the cases before the employment of a treponemocidal drug. Patients with gonorrhoea, too, with severe systemic Herxheimer reactions, usually occurring after the first or second injection of penicillin' should receive the full 7½ days' course together with 10 weekly injections of both neoarsphenamine and bismuth. A patient recently under Dr. Harkness's care had been given penicillin elsewhere for acute gonorrhoea ; 3 hours after the first injection the patient had felt very ill and had had a high temperature, but when he attended the clinic for the second injection the medical officer had considered that the reaction was not due to the antibiotic. When he was first seen by Dr. Harkness, 2½ months later, there were multiple superficial non-indurated mucous patches (teeming with *Treponema pallidum*) on the mucous membrane of the prepuce, and the Wassermann and Kahn tests were strongly positive. The two injections of penicillin had aborted the development of a chancre, and when the disease reappeared 2½ months later the lesions were of a secondary character.

So far Dr. Harkness had treated 172 civil cases of primary and secondary syphilis with penicillin and in only 49 per cent had a systemic Herxheimer reaction occurred ; many of these reactions were mild and could have been easily overlooked. There were, therefore, many gonorrhoeal cases with a concomitantly acquired syphilis which, when treated with penicillin, would give no warning of the latter disease. It was not known whether or not all such cases would show, within a matter of weeks or months, obvious signs of the disease, and it was reasonable to assume that at least some of them would not be diagnosed until years later when vital structures had been involved. This was a very serious problem, because there were now many fresh cases of syphilis. Dr. Harkness considered this to be a powerful argument in favour of at least one course of a sulphonamide compound in the treatment of acute gonorrhoea before penicillin was administered.

Dr. **McElligott** said that he had been speaking to Lt.-Col. Willcox only the previous day on the very same subject. Lt.-Col. Willcox had told him quite categorically that he had treated a number of cases of gonorrhoea in West Africa with penicillin, experimentally, and that his results had been equal, although not superior, to those obtained with sulphonamides. He had added that, in view of the fact that syphilis would be so easily masked by penicillin, he did not think that it was ever justifiable to use penicillin for the treatment of gonorrhoea, because the sulphonamides, in his experience, were so effective.

Dr. **Hamilton Wilkie** considered that it was interesting, for one who had been in Great Britain the whole time during the recent war, to hear of the difficulties with which the speakers had met abroad. He had himself been privileged to do a good deal at home. He felt that, now that the war was over and they were all facing such difficulties owing to the increase in venereal disease, those who had worked at home or abroad should all get together and express their views on the problems and their solution.

Dr. **Frankenberg** said that he would like to pay particular tribute to the work of Dr. Campbell, which he had seen in Belgium. Dr. Campbell had not mentioned one of his activities, namely the tracing of contacts of venereal diseases patients in Brussels, where they were able to get a very large percentage of contacts traced. In Royal Air Force practice it was easier to begin tracing contacts at the Service clinic itself, where they had specially trained Service policemen, who interrogated the patients and then went out and took the contacts to Belgian civil clinics. Those clinics, in their normal work, had been concerned principally with doing the bi-weekly examination of licensed prostitutes. As had happened in other parts of the world, they had found in Belgium also that clinics of that sort lent themselves to abuse, and that an organized system of licensing was not of much value.

The American and Canadian forces had spent a great deal of time, trouble, and energy in studying various aspects of venereal disease control which were not strictly medical. The Canadians had no less than 7 officers engaged in full-time control work, but he believed that they had a much higher rate of incidence of venereal disease than had the British Army, and certainly very much higher than that of the Royal Air Force. Whether or not the Canadian effort had been successful, he did not know, but their propaganda was certainly more robust.

When Dr. Frankenberg was in South Africa during the recent war, he found that the incidence of venereal disease among the South African native forces was 550 per mille per annum. The white South Africans showed some indifference to the problem of latent syphilis among the natives, and he did not suppose that these natives, as civilians, would have had any treatment.

He could bear out Dr. Campbell's findings on the denominational distribution of venereal disease, which had rather surprised him. With regard to occupation, the incidence of venereal disease was above the normal figure amongst air crews, also among the cooks and the transport drivers. One theory was that the transport drivers and the cooks missed the lectures on venereal diseases because they were travelling or busy cooking when the lectures were being given. These lectures to the troops were not made interesting enough by the medical officers. The troops regarded them as a "fatigue" and did not pay much attention. He had tried particularly to impress upon the medical officers of the Royal Air Force that they should concentrate on the prophylactic measures and give some intelligent advice about the use of condoms, which were being used purely as contraceptives and not very often for prophylaxis. About half the number of members of the armed Forces who had acquired a venereal disease had not used a condom.

How much of the medical experience in the armed Forces would be of value in civil life ? He

wished that it were possible to get bodies of men and women of various classes together, to discuss the problem of control and prophylaxis as they had done in the armed Forces, and to ask them to suggest a solution. The result in the Forces had been a very stimulating discussion, which had kept people awake and interested, and had sent them away thinking that it was a part of their responsibility and not just a matter of a man turning up for treatment when he had a discharge or a sore.

In civil life the approach of the medical profession and the authorities to the problem was far too timid. It was good to see posters and newspaper advertisements, but he did not think these put the case strongly enough or brutally enough. He felt that it was necessary to arouse the public, even at the risk of creating a little scare-mongering. Our general hospitals were places which a mixed body of patients attended ; a larger amount of propaganda should reach the attention of these large masses of people, and also those who attended doctors' surgeries. Propaganda should be done through bodies such as the trade unions, and he did not think it to be too much to suggest that some anti-venereal-disease propaganda should be carried out in the schools, particularly amongst adolescents at the Secondary Schools and at the Public Schools.

Dr. **Blair** said that he had had the opportunity of being in Denmark for 6 weeks, and that there he had met a number of the doctors, including Dr. Haxthausen (Professor of Venereology, Copenhagen University), with whom he had had a discussion on penicillin. The Danish doctors were most interested in the substance, because they had had only a very limited supply, which had been made in their own country, and so had not had the opportunity of treating venereal disease with it. When he had told them about the treatment of gonorrhoea with penicillin, and had mentioned the matter which had been brought out earlier, about the masking of syphilis, they had been rather alarmed. Professor Haxthausen had said that he would prefer not to use penicillin for gonorrhoea for 3 months, until he had found out whether or not the patient was going to show signs of syphilis which might have been contracted at the same time as the gonorrhoea.

Dr. **W. N. Mascall** said that he, unfortunately, had been one of those who had remained at home during the recent war, and that he wished to point out that although there was obstruction in the armed Forces, there had also been certain difficulties at home. Life had not been very simple, and conditions of work had not been at all ideal. Evacuation and bombing tended to upset the steady treatment of patients. Nevertheless, good work had been done, often in most difficult circumstances.

He would like to point out to Dr. Frankenberg that during the war there had been a good deal of what might be termed organized instruction on venereal diseases. The Central Council for Health Education had done a good deal in that direction ; it had appointed lecturers who had gone round speaking to boys' clubs, factory workers and various civil camps in Great Britain, and had tried to point out the dangers and the problems arising from these diseases. The lectures had not been well attended, on the whole.

During the recent war the American armed Forces had come to Great Britain and had brought their teams of contact tracers. The first set of workers whom they sent across were excellent and did bring in a number of cases, but the type had seemed to deteriorate steadily, until the last set appeared to do more harm than good. 'They used to drive about in a car marked "American Red Cross", and cases had been reported in which they had knocked on the door and broadcast to the general population round about : "We want to see Miss So-and-so : she is suffering from venereal disease." If there was anything which would prevent people from attending the clinics in Great Britain, it was publicity of that sort.

Since the outbreak of the recent war the clinic with which he was connected had installed an almoner who spent her time in social work and contact tracing, but he thought that she would admit that it was most disheartening work. With a considerable number of cases it was just one visit, one attendance, and they were off again.

He thought that everybody would probably admit that Regulation 33B had been a glorious failure ; it should have been a success, but it had not been put into practice properly. He knew quite a large number of medical officers who would not comply with it at all, and he thought that the time had now come when it should be cancelled altogether. The people who were notified simply disappeared into another district and were lost. About 50 per cent of their 33B cases appeared to default before they had completed the first course of treatment. Prison was no deterrent to these people ; they simply learned more and more ways in there of avoiding being traced in the future. Not only that, but unfortunately they received almost no treatment while they were in prison.

Dr. **Schneider Green** said that when he had had the privilege of being adviser to the Middle East Forces, he had noticed that the East and West Africans would have very large chancres, which often had additional bacterial infection and which would often be negative on dark-ground examination. Fortunately the regional glands were very large. *Treponema pallidum* often could be found in them. The femoral glands were involved far more than in Europeans. He corroborated what Dr. Lees had said with regard to the difficulties of treating syphilis in coloured troops. He had seen quite a number of skin cases out there and had found in the skin clinics a number of syphilis patients, who were then transferred to the venereal diseases centre.

With regard to the treatment of early syphilis, there had been a scare that penicillin would run short. He had been consulted on the subject and had advised a course of treatment which consisted in 300,000 units of penicillin, given in doses of 10,000 units every 3 hours, combined with daily doses intravenously of 40 milligrams of Mapharside for 8 days. This treatment seemed to have been fairly successful but, unfortunately, the cases were very difficult to follow up, and he had come home before the results were known.

Urethritis had been a trouble in the Middle East. If a man had a urethritis which occurred within 3-7 days after contact and did not show gonococci, he was given empirically the treatment for gonorrhoea. Quite a number of those cases cleared up, but there were many which did not. He had seen one case of urethritis due to gout, which he would have failed to diagnose had it not been for the advice of the orthopaedic surgeon. The patient had pains in the ankles and urethritis. Later, when a toe joint suddenly became swollen, the speaker had called in the orthopaedic surgeon, who made the diagnosis of gout. He thought that many people could give a history of intercourse, no matter from what they were suffering ; he had been astonished, however, to find that in certain cases the urethritis cleared up after the administration of colchicum.

Dr. **Jean Morton** thought that the information given on what might be called the social conditions of the troops was very valuable, and should be widely publicized and circulated to all the authorities, including the Board of Education. Dealing with all ranks, she had found one appalling factor to be that hardly any of the girls had the power within themselves to amuse themselves, which was very largely due to the educational system. At the present time the Government was considering keeping children at school a couple of years longer ; but the one thing which the child was never taught was the power of self-amusement.

Dr. **Pick** said that Dr. Lees had asked them to say whether or not they had found any relapses after penicillin therapy. Every day he had to see many soldiers coming back from Germany, and, to his great regret, he had found that the relapses among those who had had treatment with penicillin had been more numerous than they had hoped to find after the very optimistic American and British reports on the subject. In the past 2 weeks he had had the misfortune to see 3 cases with signs of reinduration at the site of the primary infection and 3 cases with widely distributed secondary lesions.

In Newcastle they adopted a compromise, never giving penicillin alone but always with the normal treatment. For primary syphilis (so-called), 2,400,000 units were given, and for secondary syphilis 3,000,000 units. He wondered whether, in 5 years' time, they would not have the great disappointment of seeing some of their patients, who were looked upon now as cured, suffering from late manifestations, particularly from central nervous system involvement, and he warned members not to look upon syphilis as being perfectly cured with small doses of penicillin.

Dr. **Lees** (in reply) stated that he did not know of any scientific laboratory investigation of the sulphonamide resistance of strains of gonococcus found in the British and Allied Forces in Italy ; he had been able to satisfy himself, however, that a great number of these infections were not cured by adequate doses of different sulphonamide preparations.

Latent syphilis occurring together with gonorrhoea, and persisting after penicillin treatment for gonorrhoea, could be missed very easily. Febrile reactions during treatment with penicillin were not very rare, and it would be rash to attribute all febrile reactions to latent syphilis. He had seen reactions in penicillin treatment which were due not to syphilis but to defects in the penicillin ; he well remembered one batch of penicillin which was contaminated with *Bacillus pyocyaneus*, and which gave rise to many febrile reactions.

Both he and Dr. Campbell were very much concerned about the prevention of venereal disease in the armed Forces, and about the muddle and lack of policy which had to be fought, but he felt that the publication of an unexpurgated edition of their experiences might land them in gaol. In the cause of the crusade against venereal disease it would be a very noble gesture on their part to undergo durance vile. They certainly could write a great deal which they dared not say, even in the present meeting, and which would be of tremendous public interest. If it were felt that publication of a detailed account would rouse the country out of its complacency and shake up army administrators, he would be prepared to consider such action.

Ex-service venereologists must endeavour to apply a certain amount of their experience to their civil work, particularly on the preventive side. Personally, he had found that the returned soldier was an extremely cooperative individual ; he turned up for treatment and was apologetic if he came a day or two late ; he was anxious to cooperate and to be cured. Dr. Lees thought that in the venereal diseases clinics a good deal of propaganda could be undertaken regarding complete cure of these diseases. The average civil patient did not seem to have the zest for a 100 per cent cure which they had experienced in patients in the Services.

Dr. **Campbell** (in reply) said that he and Dr. Lees had not written their papers together, and until they had met that afternoon neither knew what line the other was going to take. For himself, he had rather felt that perhaps he had been too outspoken in some of the things he had said and in some of the suggestions he had made, particularly in regard to the difficulties which had been encountered. He had been very gratified to find that Dr. Lees had taken a similar line and that it had met, to a certain extent, with the concurrence of the Society. As Dr. Hamilton

Wilkie had said, they should get more power into their own lives as venereologists. They had tried their hardest during the war and were beaten down ; what they had achieved was remarkable in view of the opposition they were up against. As Dr. Flynn had said, in some general hospitals the matrons were often as difficult as the Commanding Officers were in others ; they seemed to have absolutely no appreciation of life, and certainly no desire to help in the cure.

Dr. Frankenberg had mentioned the squads which had been started first in Naples and continued in the British Liberation Army ; they had certainly done a lot of good, as long as they had kept up pressure on the civil authorities. Had the venereologists been able to undertake the treatment of contacts themselves, he felt sure that they could have done a lot more good than by leaving it to the civil authorities.

SIGNIFICANCE OF THE BLOOD WASSERMANN REACTION AFTER MALARIA THERAPY IN GENERAL PARALYSIS

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It has been found that in patients with general paralysis of the insane, treated with malaria alone or with malaria and chemotherapy combined, a large number of the blood Wassermann reactions remain positive. This fact may be a cause of considerable anxiety to the patient (if he be aware of it), to the relatives and to the physician. Furthermore, a great deal of time and money may be expended on an effort to render the Wassermann reaction negative. This article contains a report of two investigations bearing on the subject and an attempt to correlate these findings with other information available.

Somatic syphilis and general paralysis

In the first investigation the clinical records of 312 general paretics at Horton Hospital were examined for evidence of somatic syphilis. The patients had been under observation for periods varying from a few months to 15 years. Of the total number, 144 patients had died in the hospital and the remainder had been discharged. Thus clinical material representative of all stages of the disease was available. Of the group with a fatal outcome, 18 patients had not been treated with malaria ; all the others had been treated with malaria alone.

Clinical findings

Of the 312 cases, in 3 there were lesions suggestive of meningo-vascular syphilis or cerebral gumma. In these cases the diagnosis of general paralysis was doubtful. Of 6 congenital cases, in one there was syphilitic otitis and interstitial keratitis, in another choroiditis. In one there was a history of syphilitic rash, in another of jaundice. There were 2 clinical cases of aortic stenosis and 2 of aortic regurgitation. Another patient was discovered clinically and radiologically to have an early aneurysm of the aorta. In 3 cases ulcerated legs had been diagnosed as syphilitic, but there is a strong probability that the lesions were varicose. Two patients had ulceration of the soft palate ; in one the process involved the larynx and nasal septum.

Post-mortem findings (144 necropsies)

Out of a total of 144 post-mortem examinations, 23 cases of syphilitic aortitis were recorded. None of the patients concerned had complained during life of any symptoms referable to the aorta. One patient had an early aneurysm of the aorta. In one case a diagnosis of aortic regurgitation was made during life and confirmed *post mortem*. In this instance death appears to have been due to